APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
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EXAMINER
BUTLER,M

ART UNIT	PAPER NUMBER
3651	

DATE MAILED:

02/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

☒ Responsive to communication(s) filed on _Jan 8, 2001_

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters,   **prosecution as to the merits is closed** in accordance with the practice under   _Ex parte Quayle,_ 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire _____ _3_ ___ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) _1-20_ _____ is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) _1-20_ _____ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None   of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- *SEE OFFICE ACTION ON THE FOLLOWING PAGES* ---

DETAILED ACTION

1.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action, and apply to this and any subsequent Office Actions.

Drawings

2.   New drawings are required upon allowance because the drawings were declared informal by the applicant.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-18, as in paper number 5, along with newly added claims 19-20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Conboy et al. '566.

Conboy et al. '566 discloses:

(re: cl 1) An automated material handling system, comprising:

a plurality of material carriers including a plurality of empty carvers classified into two or more carrier types;

one or more stock areas each including a plurality of bins for storing material carriers, wherein each stock area is associated with one or more thresholds for each carrier type;

a control system coupled to a first one of the stock areas for computing an empty percentage for the first stock area for each carrier type, the empty percentage for a

particular carrier type being the percentage of bins of the first one stock area which

contain empty carriers of the particular type; and

a transportation system responsive to the control system for selectively moving an empty

carrier of a certain carrier type between a staging area and the first stock area based on a

comparison of the empty percentage for the certain carrier type to the one or more

thresholds of the first stock area for the certain carrier type (c 12 L 50-67);

(re: cl 2) the material carriers include semiconductor wafer carriers (c 13 L 1-3);

(re: cl 3) the one or more thresholds for the empty carrier of the certain carrier type

include a maximum value and wherein the transportation system moves an empty carrier

of the certain carrier type from the first stock area to the staging area if the maximum

value is exceeded by the empty percentage of the certain carrier type (c 13 L9-14);

(re: cl 4) The automated material handling system as recited in claim 1, wherein the one

or more thresholds for the empty carrier of the certain carrier type include a minimum

value and wherein the transportation system moves an empty carrier of the certain carrier

type to the first stock area from the staging area if the empty percentage of the certain

carrier type falls below the minimum value (c 13 L 14-19);

(re: cl 5) the staging area includes a second one of the stock areas (c 13 L 20-23);

(re: cl 6) the control system calculates a system move rate as the number of the plurality

of material carriers moved by said transportation system in a predetermined time period

and the transportation system moves the empty carrier of the certain carrier type between

the staging area and the first stock area only if the system move rate is less than a

predetermined value (c 13 L 35-39);

(re: cl 7) each empty carrier type is associated with a priority and wherein the

transportation system moves the empty carrier of the certain carrier type between the first

stock areas and the staging area based on the priority of the certain carrier type and the

priorities of other carrier types (c 13 L 40-44);

(re: cl 8) the control system calculates an empty move rate for the certain carrier type as

the number of empty carriers of the certain carrier type moved by the transportation

system in a predetermined time period and the transportation system moves the empty

carrier of the certain carrier type between the staging area and the first stock area only if

the empty move rate for the certain carrier type is less than a predetermined value (c 13 L

29-31);

(re: cl 10) A method for managing empty material carriers in an automated material

handling system including a plurality of material carriers including empty material

carriers and one or more stock areas each including bins for storing material carriers, the

method comprising: classifying at least the empty material carriers into two or more

carrier types; (c6 L 56-67; c 12 L 67);

associating each of the stock areas with one or more thresholds for each carrier type (c9 L

3-11);

computing an empty percentage for each empty carrier type for a first one of the stock

areas, the empty percentage for a particular empty carrier type being the percentage of

bins of the first one stock area which contain empty carriers of the particular type (c 8 L

40-52); and

selectively moving an empty carrier of a certain carrier type between a staging area and

the first stock area based on a comparison of the empty percentage for the certain carrier

type for the first stock area to the one or more thresholds of the first stock area for the certain carrier type (c 14 L 39-42);

(re: cl 11) the material carriers include semiconductor wafer carriers (c 14 L 43-44);

(re: cl 12) the one or more thresholds for the empty carrier of the certain carrier type include a maximum value and wherein selectively moving the empty carrier of the certain carrier type from the first stock area to the staging area includes moving the empty carrier of the certain carrier type if the maximum value is exceeded by the empty percentage of the certain carrier type (c 13 L9-14);

(re: cl 13) the one or more thresholds for the empty carrier of the certain carrier type include a minimum value and wherein selectively moving the empty carrier of the certain carrier type to the first stock area from the staging area includes moving the empty carrier of the certain carrier type if the empty percentage of the certain carrier type falls below the minimum value (c 13 L 14-19);

(re: cl 14) the staging area includes a second one of the stock   (c 13 L 20-23);

(re: cl 15) calculating a system move rate as the number of the plurality of material carriers moved in the system in a predetermined time period, wherein selectively moving the empty carrier of the certain carrier type between the staging area and the first stock area includes moving the empty carrier of the certain carrier type only if the system move rate is less than a predetermined value (c 13 L 35-39);

(re: cl 16) associating each empty carrier type with a priority, wherein selectively moving the empty carrier of the certain carrier type between the first stock areas and the staging area includes moving the empty carrier of the certain carrier type based on the priority of the certain carrier type and the priorities of other carrier types (c 13 L 40-44);

(re: cl 17) calculating an empty move rate for the certain carrier type as the

number of empty carriers of the certain carrier type moved in the system in a

predetermined time period, wherein selectively moving the empty carrier of the certain

carrier type between the staging area and the first stock area including moving the empty

carrier of the certain carrier type only if the empty move rate for the certain carrier type is

less than a predetermined value (c 13 L 29-31).

Conboy et al. '566 does not disclose: the empty carriers are classified into

a plurality of carrier types; that the empty move rates are global. The examiner takes

official notice that the use of global parameters are well known. It would have been

obvious for Conboy et al. '566 to use global empty move rates because global parameters

are easy to transmit between diverse control modules facilitating modular control

programs. It would have been obvious for Conboy et al. '566 to classify the carriers into

a plurality of types because knowing the attributes and features of the carriers assists in

determining which carriers to move.

Applicant challenges the examiner's assertion that the use of global parameters is

well known in the programming arts for parameter passing. In rebuttal, the examiner

points to Burney (c46 L 38-54) and Tau et al. (c28 L 12-c29 L 64; c 35 L 1-8; c 9 L 45-

64) as evidencing that global parameter passing is well known in software control for

passing parameters such as variables between routines.

5.   Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Conboy et al. '566 in view of Burney. Conboy et al. '566 discloses the elements

previously disclosed, but does not disclose: the empty carriers are classified into a

plurality of carrier types; that the empty move rates are global. Burney discloses: the

empty carriers classified into a plurality of carrier types (c33 L 8-28;c12 L 18-26; c2 L7-24; c 21 L 1-18); the use of global carrier parameters (c46 L 38-54). It would have been obvious for Conboy et al. '566 to make the empty move rate a global parameter because: global parameters ease the transmitting of parameters between diverse control routines facilitating modular control programs and routines as taught by Burney. It would have been obvious for Conboy et al. '566 to use a plurality of carrier types because classifying the carriers into a plurality of types aids in knowing the attributes and features of the carriers thereby assisting in determining which carriers to move as taught by Burney.

6.   Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conboy et al. '566 in view of Tau et al.. Conboy et al. '566 discloses the elements previously disclosed, but does not disclose: the empty carriers are classified into a plurality of carrier types; that the empty move rates are global. Tau et al. discloses: the empty carriers classified into a plurality of carrier types (c34 L 1-19); the use of global carrier parameters . (c28 L 12-c29 L 64; c 35 L 1-8; c 9 L 45-64). It would have been obvious for Conboy et al. '566 to make the empty move rate a global parameter because: global parameters ease the transmitting of parameters between diverse control routines facilitating modular control programs and routines as taught by Tau et al..

It would have been obvious for Conboy et al. '566 to use a plurality of carrier types because classifying the carriers into a plurality of types aids in knowing the attributes and features of the carriers thereby assisting in determining which carriers to move as taught by Tau et al..

Double Patenting

7.   The nonstatutory double patenting rejection is based on a judicially created

doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d

1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed.

Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*,

422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163

USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be

used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly

owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a

terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply

with 37 CFR 3.73(b).

8.   Claims 1, 2, 3, 4, 5, 6, 7, 8, 9,19, & 20 are rejected under the judicially created

doctrine of double patenting over claims 1, 2, 4, 5, 6, 10, 11, 8, 8,1 & 8 respectively of

U. S. Patent No. 5,838,566 to Conboy et al., as in paper number 5, so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent

and the claims, if allowed, would improperly subject applicants to harassment from

multiple assignees. It would have been obvious to extend the teachings of Conboy et al.

'566 to a system having a plurality of stocking areas because a carrier system with a

plurality of stocking areas presents an opportunity to move parts between several locations comprising plural stages of processing, creating more flexibility than a system having merely one stocking area. The use of global control parameters are well known and it would have been obvious It would have been obvious for Conboy et al. '566 to modify claim 8 to use global empty move rates because global parameters are easy to transmit between diverse control modules facilitating modular control programs. It would have been obvious for Conboy et al. '566 to use a plurality of carrier types because classifying the carriers into a plurality of types aids in knowing the attributes and features of the carriers thereby assisting in determining which carriers to move.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The examiner in particular calls to the attention to the applicant the

patent to Iwasaki et al. filed eight months prior to the instant but two years subsequent to

the Conboy et al. 566 reference. Iwasaki et al. discloses: An automated material

handling system, comprising:

a plurality of material carriers including a plurality of empty carvers classified into two or

more carrier types; one or more stock areas each including a plurality of bins for storing

material carriers a control system coupled to a first one of the stock areas for computing

an empty percentage for the first stock area for each carrier type, the empty percentage

for a particular carrier type being the percentage of bins of the first one stock area which

contain empty carriers of the particular type; and a transportation system responsive to

the control system for selectively moving an empty carrier of a certain carrier type

between a staging area and the first stock area based on a comparison of the empty

percentage for the certain carrier type to the one or more thresholds of the first stock area

for the certain carrier type.

11.   As the applicant was unable to overcome the prior art with a seasonably filed

1.131 affidavit (MPEP 715.09), the examiner points out that applicant may be able to

overcome the prior art by taking advantage of the AIPA amendments to 103(c), if the

instant invention was commonly assigned or under an obligation to be commonly

assigned at the time of invention, via the use of a post 11/29/99 filed application under

rule 1.53(b) or 1.53(d).

Art Unit: 3651

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Exmr. Michael E. Butler whose telephone number is

(703) 308-8344.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher Ellis, can be reached on (703) 308-2560. The fax number for the

Group is (703) 305-7687.

Michael E. Butler

Michael E. Butler

Examiner

Joseph E. Valenza

JOSEPH E. VALENZA
PRIMARY EXAMINER